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THESIS

THE MARINE CORPS WEST COAST COMMISSARY COMPLEX:
AN EX POST EVALUATION

by

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June 1985

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The Marine Corps West Coast Commissary Complex was established in 1979 in response to Congressional and Department of Defense pressures to improve the efficiency of commissaries in all military services. The Complex consolidated the functions of personnel management, procurement, accounting, and distribution of non-perishable goods in support of six previously independent stores, and incorporates a system of automated communication and data processing.
This study evaluates the advantages of consolidation, which include economies

of scale, enhanced management, and improved inventory and cash flow management and customer service. The performance of the Complex is compared with other military commissary systems and with commercial food retailers, and suggestions made for further improvements in commissary operations.

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The Marine Corps West Coast Commissary Complex: An Ex Post Evaluation

by

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Submitted in partial fullfillment of the
requirements for the degree of

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ABSTRACT

The Marine Corps West Coast Commissary Complex was established in 1979 in response to Congressional and Department of Defense pressures to improve the efficiency of commissaries in all military services. The Complex consolidated the functions of personnel management, procurement, accounting, and distribution of non-perishable goods in support of six previously independent stores, and incorporates a system of automated communication and data processing.

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I. INTRODUCTION

Commissary stores have been a feature of military life in the United States Armed Forces since the early nineteenth century. They were originally conceived and authorized by Congress in 1825 as a source of reasonably-priced subsistence for Army officers stationed at remote frontier outposts (enlisted personnel at the time subsisted in Army mess halls). This authority was expanded to include enlisted Army personnel in 1866 and further extended to all military branches shortly thereafter. Since that time, the number of stores within the country has proliferated, reaching a total of 240 in 1984. The commissary benefit has come to represent an important part of indirect remuneration for service members and retirees.

In the years following World War II, commissaries have been frequently scrutinized by Congress. Overseas commissaries are generally conceded to be necessary to the morale and welfare of service members living in foreign cultures, but questions have been raised about the continued justification of the stores within the continental United States, with its increasingly urbanized population and modern transportation and commercial food retail networks.

The inflation rates of the 1960's and, more recently, concerns about the growing federal deficit, have resulted in pressures to justify continuation of commissaries and to improve their operating efficiency.

Prior to 1979, the five west coast Marine Corps bases and air stations operated six independent commissary stores. Each of these stores was responsible for its own item selection, determination of stock levels, procurement, warehousing, marketing, and limited personnel functions within guidelines established by Congress, the Department of Defense (DOD), and the Marine Corps. Each store was supported by its respective host station in such overhead areas as personnel administration, finance, disbursing, auditing, and other common services such as security, fire protection, trash and rubbish removal, and routine building maintenance.

The Marine Corps West Coast Commissary Complex was formed in 1979 in response to Congressional and DOD pressures to improve the efficiency of military commissaries in all the services. The Complex originally encompassed those six of the Marine Corps' fourteen domestic stores which are located on the west coast. Its establishment permitted consolidation of many of the functions described above. Certain areas of overhead which had been provided by the separate host activities, such as finance, disbursing,

audit, and personnel administration were also centralized under the Commander, Marine Corps Air Bases, Western Area (COMCABWEST). This command, located at Marine Corps Air Station (MCAS) El Toro, California, acts in the capacity of host command for the Complex headquarters and exercises fiduciary responsibility under Section 1517 (formerly Section 3679) of the Revised Statutes. In 1982, the Complex also began to serve the Marine Corps' one overseas store in Iwakuni, Japan. Plans are being made to incorporate the store at MCAS Kaneohe Bay, Hawaii during 1985.

The Marine Corps Air Station at El Toro (Orange County), California was selected as the site for the Complex headquarters and Central Distribution Center (CDC) based on availability of existing facilities, as well as an analysis of mileage and the required bulk and frequency of deliveries of non-perishable goods to the individual stores associated with the Complex.

Previous commissary operations in the Marine Corps had relied primarily on manual management information systems. A civilian firm, Management Horizons, Incorporated, was engaged in 1978 to perform a review and analysis of the commissaries to identify opportunities for automated data processing (ADP) and management information systems (MIS) applications. This study resulted in the leasing of computer hardware for the Complex and participating stores, and in a time-sharing, distributed data processing (DDP)

contract to provide data manipulation and communications and generate management reports. The software utilized for management, procurement, and inventory control applications was already in existence, having been originally developed for commercial pharmaceutical and hardware retail firms. This software has proved readily adaptable for commissary purposes, and will be further discussed later in the thesis.

The expected advantages of centralization included: (1) economies of scale, to be achieved through reduction in total inventory and warehouse requirements; (2) reductions in labor and overhead costs through centralization of functions; (3) management improvements to result from pooling of managerial skills; (4) improving store operations by relieving store managers of accounting and administrative duties; (5) enhancement of inventory control and cash flow management through automation; (6) reduced prices and wider ranges of stock, especially at the smaller stores, through elimination of vendor order minimums; and (7), most importantly, the resulting reduction in subsidies to the commissaries through appropriated funds. These benefits have become a reality and, since the Complex's inception, other innovations that might have been economically infeasible for the independent stores have further contributed to overall efficiency and effectiveness.

An area that should be of concern in consolidation of any service is the possibility of reduced responsiveness to the customer. The further removed management is from the individual customer, the greater the possibility that responsiveness to that customer's individual preferences will be degraded. In the case of the Complex, this has not been the case. As measure by the increased range of goods stocked and decreased frequency of stockouts, the result has been improved customer service. The smaller, more isolated stores can now offer an increased range of goods for sale at prices lower than was previously possible. This effect results from consolidation of procurement; centralization of warehousing, which has obviated the stores' need to warehouse quantities of slow-moving items; and from an economical method of central distribution which has decreased vendor distribution charges and provides the additional benefit of redistribution allowances (RA's) remitted by the vendors.

This thesis comprises an ex post evaluation of the West Coast Commissary Complex. Included are a brief history of the military commissary stores system; comparisons of the Complex's performance with that of the Marine Corps and DOD as a whole; and comparisons where possible with certain aspects of commercial food retail operations where appropriate data were available. Additionally, certain innovations employed by the Complex are highlighted which

may prove adaptable to enhance the efficiency and effectiveness of other commissary operations within DOD.

II. BACKGROUND AND HISTORY

To understand the pressures exerted on the military commissary system, now the nation's eighth largest food retailer, to operate efficiently and effectively, an understanding of the history of commissaries is helpful.

In 1825 Congress first authorized the Army to sell food and certain other items at cost to officers stationed at remote frontier outposts. This authority was expanded to include enlisted personnel in 1866, and to the other services soon thereafter [Ref. 1]. By 1984, there were 240 commissary stores within the United States [Ref. 2].

Since World War II military commissaries have been periodically assailed both on the basis of their continued justification as an institution and because of the significant amount of taxpayer subsidy received through appropriated funds. In hearings before the House Committee on Armed Services held in 1949, the opinion was expressed that Congress' original intent was never to provide services of this nature to military personnel where they are able to buy from a private retailer, and that the sole justification of the commissary system was to provide subsistence in remote locations where adequate commercial facilities were

not readily available. In response to this opinion, DOD submitted new criteria for justification of commissaries based on adequacy, convenience, and prices. Since 1953, Congress has required that the Secretary of Defense annually certify the need for each commissary store based on these criteria [Ref. 3]. The criteria as presently stated are outlined in Exhibit 1 [Ref. 4].

In the early 1960's the commissary question surfaced again when, in response to a request by Congress, the General Accounting Office (GAO) reviewed the background of and authorization for the 269 stores then in existence. The GAO reported that the criteria for justification were unrealistic and did not meet Congress' original intent [Ref. 5].

Commissary benefits were considered an element of military compensation before 1967 [Ref. 6]. The first Quadrennial Review of Military Compensation Panel reported in that year that this was inappropriate. Service members, the panel said, realized unequal benefits due to variations in family size, income level, availability of commissary stores, and individual consumer preferences. The panel's report concluded that, if this benefit were to be considered a legitimate element of compensation, its value should be quantified, and cash provided in lieu of benefits where that value was not realized by the service member [Ref. 7].

JUSTIFICATION OF COMMISSARY STORES

I. ADEQUACY. Commercial stores must:

A. Offer the same product groups as those authorized for commissaries.

B. Offer a reasonable selection of better-known nationally or locally established brands.

C. Have adequate floor space.

D. Meet the installation commander's sanitation standards.

E. Sell meats and poultry originating from sites subject to USDA inspection.

II. CONVENIENCE. Commercial stores must:

A. Be situated on an adequate, year-round, hard-surfaced road network.

B. Be within 15 minutes by private vehicle from the center of the activity housing area, under normal traffic conditions.

III. REASONABLE PRICES

A. There must be a sufficient number of stores meeting the above criteria to assure free and open competition.

B. Prices (less sales tax) in two stores meeting the above criteria cannot exceed commissary prices (less surcharge) by more than twenty per cent, based on the cost of a "standard market basket" for an average family as specified by the Bureau of Labor Statistics, U.S. Department of Labor.

(Source: DOD Directive 1330.17)

EXHIBIT 1

The inflation rates of the 1970's caused Congress, DOD and the Office of Management and Budget (OMB) to decide that measures should be taken to at least reduce the cost to government of commissary services, if not eliminate domestic commissaries altogether. The Secretary of Defense's Program/Budget Decision 282, issued in 1974, proposed elimination of direct appropriated support to commissary stores for costs of labor and utilities (the largest expense categories) and ordered a DOD study

> "...to determine ways to improve the efficiency, organization and operating structure of the commissary stores to assure continued savings to patrons, while at the same time providing for the reimbursement...of direct personnel and utility costs...supported by... appropriated funds." [Ref. 8].

The study apparently anticipated the withdrawal of appropriated funds. Although Congress had not reduced appropriations, committees and individual members had frequently directed or suggested that the amount of subsidies be reduced through improved efficiency and management [Ref. 9]. The DOD study group estimated that if appropriated funds were withdrawn and had to be compensated for through increased surcharges, savings to patrons would decrease to approximately twelve percent from the 22 percent savings reported at the time. This policy would doubtless have resulted in reduced patronage and sales. The group sought to ameliorate this decrease in savings primarily by concentrating on efficiency improvements, cost reduction

measures, and enhancement of services to patrons. The recommendations of the group advocated adoption within each service of centralized commissary management, and a future assessment of establishing a joint commissary system. Other recommendations dealt with facility improvements and the use of ADP systems to further promote efficiency and as an aid to management [Ref. 10].

Following publication of this study, the Secretary of Defense directed in July of 1975 that the services implement the recommendations, that the number of commissary employees be reduced by 2,228 (66 in the Marine Corps' system), and that additional cost-saving initiatives be undertaken [Ref. 11].

The budget submitted by DOD for 1976 voluntarily phased out appropriated funds for wages and salaries of commissary employees and for overseas utilities expenses. The savings, estimated at about $300 million over the two-year phaseout period, were to be offset by an increase in the surcharge to patrons. During Congressional budget hearings, both patrons and suppliers opposed this move because of perceived adverse effects on morale, recruitment and retention and because of the possibility that the savings might be illusory. A 1975 Navy study had indicated that for each dollar of commissary subsidy decrease, more than a dollar of expenditure would be required for recruiting and training or for other direct compensation to offset the effects of the reduction.

The House restored full funding, which was approved in the 1976 Appropriation Act. [Ref. 12]

The DOD budget for fiscal 1977 again proposed reducing the appropriation, this time over a three-year period. Again, the full amount was restored by the House and included in the final authorization and appropriation acts. However, agreement was reached in the Congress that support should be gradually reduced. The 1977 Defense Authorization Bill stated:

> "...economies can be realized by improving the efficiency of commissary store operations. Such improvement would permit the commissary subsidy to be gradually reduced while retaining substantially the level of savings experienced by commissary patrons."

and directed that management improvements be initiated. The conference report was explicit in stating that reduction in subsidized costs, and not elimination of commissary benefits, was the intent of the legislation. [Ref. 13]

In both the 1978 and 1979 appropriation bills, the Senate Appropriations Committee recommended a three-year phaseout of these funds. The full Senate adopted this recommendation in the 1979 bill, but the conference committee deleted the phaseout without explanation. [Ref. 14]

Concerns about the federal deficit in the 1980's have kept the issue of commissary benefits and operations alive. The report of the President's Private Sector Survey on Cost

Control (Grace Commission) in 1983 again assailed the legitimacy of commissaries in the United States. The Commission cited DOD's required annual survey and justification of stores prepared in 1982, in which 62 percent of the domestic stores were justified solely on the "reasonable price" criterion described in Exhibit 1 and the services reported an average price advantage of 30 percent over commercial food outlets [Ref. 15]. Based on this reported saving, and because of improvements in military compensation, the Commission's report concluded that

> "There appears to be no reason for the taxpayers' subsidy of the food purchases of military employees." [Ref. 16].

The Commission recommended termination of the commissary system within the United States, estimating savings of $972.7 million over a three-year period [Ref. 17].

Publication of the Grace Commission's findings was followed by a joint Office of Management and Budget/General Accounting Office review, and by Congressional hearings on the defense budget in early 1984. At the time of the hearings, the services were operating a total of 378 stores, comprising 240 domestic and 138 overseas commissaries [Ref. 18], a reduction from 259 domestic stores in 1963 [Ref. 19]. Of these totals, the Marine Corps operates 14 domestic stores and one overseas.

The discussions during these hearings centered around both the issue of cost effectiveness to the American

taxpayer vis-a-vis the amount of the appropriated funds subsidy to the commissary system, and the justification for commissaries as an institution.

A. COST EFFECTIVENESS OF SUBSIDY

The Congressional discussions in 1984 regarding cost effectiveness to taxpayers centered around the perception by military personnel and retirees of the commissaries' value as (1) a form of non-pay compensation and, (2) an implicit condition of military service. Private sector and DOD surveys have consistently shown an average 25 percent savings to commissary patrons when prices are compared to commercial food outlets. The Assistant Secretary of Defense for Manpower, Installations and Logistics testified that this was an average savings, and that the economic importance of the commissary was even greater for active duty enlisted personnel, junior officers and retirees residing in metropolitan areas, due to the inherently higher cost of living in urban communities. [Ref. 20]

Projection of this 25 percent savings in food costs to individual service families yielded an estimated average value of the commissary benefit of about $1200 per family per year. Four surveys, one conducted by the Army and three by private firms in the years from 1980 to 1983, supported this estimate. Three of the four surveys further indicated that, among service families, the commissary benefit was

seen as the second most important fringe benefit after health care [Ref. 21]. DOD's position in these hearings was that if commissaries were closed, another form of compensation would be required to overcome detrimental effects on recruiting and retention. Based on the above figures, and using Fiscal Year 1983 budget data, this recompensation to military families was estimated to be worth $674.5 million, or 87 percent more than the $361.5 million commissary appropriation [Ref. 22].

The above figures include only the estimated cost of compensation to married members for loss of commissary stores. A second benefit which should be considered is the increase to the real property asset base of the nation which results from construction of commissary facilities. This construction is funded wholly by nonappropriated revenues of the commissary system, obtained through the surcharge paid by patrons, and totalled $193 million during the period 1981 to 1983. Commissary facilities constructed with such funds have no direct cost to the taxpayer, and are turned over to the government. Should a facility be closed, any proceeds would accrue directly to the U. S. Treasury, not to the services or DOD. [Ref. 23]

B. IMPLICIT CONTRACT

A second issue raised during the 1984 hearings concerned the implicit contract between the government and military

members that the commissary benefit is an entitlement available to active duty and retired service personnel, 100 percent disabled veterans, surviving spouses of deceased members, and other categories of authorized patrons. Service members perceive this as an earned benefit for themselves and their dependents; its elimination, they maintain, would constitute a breach of faith on the part of the government. Aside from the potential adverse effects on recruitment and retention previously noted, the military services and veterans' organizations constitute a powerful political lobby. This reality no doubt played a large role in Congress' deliberations, regardless of the difficulty in attempting to quantify either the true economic value of commissaries to their patrons or the moral implications of such a breach.

The validity of the services' contention that elimination of commissaries would exacerbate recruitment and retention problems is supported by a 1980 GAO report. This report indicated that U.S. military pay rates, when considered in terms of purchasing power, were substantially lower than those of three other western countries with all-volunteer services [Ref 24: p. 1]. Of the nations in the GAO study, two (Australia and the United Kingdom) offered no commissary benefits and the third (Canada) had no government

subsidization of the existing commissaries [Ref. 24: pp. 13-60].

The fact that these countries offered higher pay rates to maintain their all-volunteer services tends to support service claims of the value of the commissary to recruiting and retention within the United States military.

III. COMMISSARY COMPLEX OPERATIONS

A. GENERAL

The Marine Corps West Coast Commissary Complex comprises a headquarters and Central Distribution Center (CDC) and six domestic commissary stores. The CDC provides procurement and distribution of non-perishable goods. It also serves the Marine Corps' one overseas store in Iwakuni, Japan and, through Interservice Support Agreements (ISA's) with the U.S. Army, supports army reserve units undergoing training in southern California and the National Training Center at Fort Irwin, California. Exhibit 2 provides a general overview of the activities which constitute the Complex. Iwakuni is not displayed because inventory provided is transferred as Stock Fund dollars from the Complex to the Iwakuni store, and reimbursements are made directly to the service headquarters by that store.

The organization of the Complex headquarters and CDC is presented in Exhibit 3.

B. FUNDING

An analysis of commissary operations requires an understanding of not only the organizational structure and

procedures, but of sources and disposition of funds. This section provides a description of those aspects of funding and fund flows considered in the analysis.

COMPLEX ACTIVITIES

ACTIVITY	LOCATION	NUMBER OF FTE EMPLOYEES	SIZE (SQFT)	FY-84 SALES ($MILLION)	NUMBER ITEMS STOCKED
HQ/CDC	MCAS El Toro, CA	42	125,000	NA	3300
Store #1	MCAS El Toro, CA	82	26,520	21.536	7142
Store #2	San Onofre, CA	17	8,674	3.517	4858
Store #3	Camp Pendleton, CA	81	26,240	19.874	7156
Store #4	Barstow, CA	19	6,283	2.721	4632
Store #5	29 Palms, CA	32	9,700	7.084	6425
Store #6	Yuma, AZ	27	12,630	5.533	4773

EXHIBIT 2

1. Appropriated Funds

a. Operations and Maintenance Funds

Each branch of service provides appropriated funds for support of its commissaries through its Operations and Maintenance (O&M) budget. These funds are provided by

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|                                                                     |
|          COMPLEX HEADQUARTERS/CDC                                   |
|                                                                     |
|                                                                     |
|                         ---------------                             |
|                        |  West Coast   |                            |
|    -------------------|    Complex     |                            |
|   |                    |    Officer    |                            |
|   |                     ---------------                             |
|   |                                                                 |
|   |         --------------          ---------------                 |
|   |        | Operations   |        | Merchandise   |                |
|   |--------| Coordinator  |--------|   Manager     |                |
|   |         --------------          ---------------                 |
|   |                                                                 |
|   |         ---------------         ---------------                 |
|   |        | ADP Systems   |       |      ADP      |                |
|   |--------|   Manager     |-------|   Operations  |                |
|   |         ---------------         ---------------                 |
|   |                                                                 |
|   |         ------------------       ------------                   |
|   |--------| Administrative   |-----| Clerical   |                   |
|   |        |     Manager      |      ------------                   |
|   |         ------------------                                      |
|   |                                                                 |
|   |         --------------          --------------                  |
|   |--------| Purchasing   |--------| Purchasing   |                 |
|   |        |   Manager    |        |   Agents     |                 |
|   |         --------------          --------------                  |
|   |                                                                 |
|   |         -------------          -----------------                |
|   |        |  Financial  |        | Budgeting and   |               |
|   |--------|   Manager   |--------|  Accounting     |               |
|   |         -------------         |    Branch       |               |
|   |                                -----------------                |
|   |         -------------          -------------                    |
|   |        |   Central   |        |  Warehouse  |                   |
|    --------|  Warehouse  |--------|    Labor    |                   |
|            |   Manager   |        |    Force    |                   |
|             -------------          -------------                    |
|                                                                     |
|                                                                     |
|                       EXHIBIT 3                                     |
|                                                                     |
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Congress on an annual basis, and do not require reimbursement from revenues. They are made available to the commissaries primarily through host activity channels.

Operations and Maintenance funds are used to pay for specified aspects of commissary operations, including civilian wages and salaries; overseas transportation of goods for sale; utilities for overseas stores; government transportation between domestic, base-level activities; maintenance, repair and replacement of Class 2 property such as heating, electrical, plumbing, and sewage systems; routine, scheduled building maintenance; and common overhead services provided by the host activity such as security, fire protection, trash/garbage removal, payroll, personnel administration, auditing and disbursing services [Ref. 25].

b. Manpower Funds

Manpower (MP) funds are utilized to pay wages and salaries of military personnel assigned to commissaries. In the Marine Corps, all commissary system positions are held by civilians.

c. Marine Corps Stock Fund (MCSF)

The purchase of goods for resale is funded through perpetual stock funds. These funds are revolving, allotted based on budgeted projections of cost of goods sold, and reimbursed directly through revenues generated by the sale of commissary goods at cost [Ref. 26].

2. Nonappropriated Funds

The category of nonappropriated funding comprises the Trust Revolving Fund (TRF). This fund is generated from a standard five percent surcharge imposed at the point of sale and from any additional operating economies realized by the store. TRF funds are remitted directly to the service headquarters. They are reallotted to the commissaries under two budget projects.

a. Operations

The first budget project under the TRF is for funding of operations. Operational funds are used for purchase of operational supplies such as wrapping paper, paper bags, and cellophane; administrative and clerical supplies; and to reimburse host activities for utilities, telephones and common services. These funds are also used for payment of contractual services such as laundry, automatic data processing, transportation, and commercial inventory services; to compensate the Stock Fund for inventory losses; and to purchase minor operating equipment such as knives, carts, and trays [Ref. 27].

b. Investment

The second category of TRF funds, used for investment-type projects, is allotted based on the annual budget and the five-year plan. Investment funds are used for new commissary construction or major renovation and for the purchase of equipment such as materials handling

equipment (MHE), display cases, refrigeration equipment, cash registers, and other operating assets costing over $1000 [Ref. 28]. This budget project comprises residual funds after operating fund requirements have been satisfied.

C. ITEM SELECTION

1. CDC Items

Selection of items to be stocked and distributed by the CDC is determined at monthly meetings of the store managers and Complex personnel. Complex buyers or store managers may propose new items for CDC distribution; however, projected demands must indicate a volume which would make central warehousing and distribution economical. Sales of proposed new items are estimated based upon previous experience with similar items, the vendor's price, any planned promotions, etc. Because of space limitations, the CDC is restricted to 3500 item locations. Each new item must therefore have a higher sales potential than another item it will displace. Actual sales performance will determine whether it is retained.

At these monthly meetings, a review is also conducted of "last buy" reports to identify slow-moving items which are no longer economically stocked. These items become candidates for replacement by new items. Because computer master files and processing are required for all items carried, thus adding to the cost of the Management

Horizons contract, periodic purging of slow movers is important to economical operations.

The overall goal of stock selection for the CDC is to keep the limited number of warehouse product locations filled with the fastest-moving items.

2. Non-CDC Items

The stores are not limited to items stocked by the CDC or provided by DPSC vendors. Individual stores may use special BPA's, administered by the Complex, to procure locally available items where a cost savings can be realized, such as during local harvest seasons. These BPA's are also used for locally popular items which may not be available through DPSC sources or approved for interstate commerce. In this way, additional pricing economies can be realized and the preferences of geographically diverse customers met.

Individual customers may also request special orders of items in case-lot quantities. The Complex obtains these items through existing BPA's or through special purchase orders.

D. PROCUREMENT

Wholesale vendors are required by federal law to offer goods to the commissary system at prices no higher than the lowest price offered to commercial retailers within the same geographical region. The Defense Personnel Support Center

(DPSC) publishes periodic supply bulletins of standard prices by vendor and region, world-wide, for those vendors who service at least 25 commissary stores. The prices listed are typically FOB destination, and are maximum prices subject to negotiation by customers. Meat, produce, and dairy and bakery products, except under special circumstances, are procured through DPSC vendors for direct delivery to the stores.

The procurement of inventory to support the affiliated stores occurs through two channels; purchase orders (PO's) for goods stocked and distributed through the CDC, and Blanket Purchase Agreements (BPA's), which are utilized by both the CDC and individual stores but are administered by the Complex. These purchase methods are discussed in the next section.

E. DATA PROCESSING AND MIS

The data processing and MIS systems for the Complex were developed in conjunction with COMCABWEST and Complex personnel, and installed by the Informatics General Corporation. A distributed data processing system is utilized which provides on-line file inquiry, order scheduling and order processing at the Complex headquarters through interface with the Management Horizons mainframe computer.

The affiliated domestic stores utilize cathode ray tube (CRT) terminals to input daily store sales data, receipts against Blanket Purchase Agreements (BPA's), and weekly labor data. Two Data Order Entry (DOE) devices at each store are used to input store orders. These devices are programmable to permit user prompting, are completely portable, and are equipped with optical scanning pens to wand bar codes for efficient, accurate input.

1. Central Distribution Center Items

Sales data received from the stores for CDC-stocked items are input daily to the central computer, where they are processed through eight predictive statistical models which consider on-hand inventory; vendor minimum order quantities; reorder cycles; historical order lead time; sales velocity; unit standard pack (USP); safety stock levels; price, weight, and cube; and a buying multiple (to assure even-level pallet packing for handling efficiency). After processing, the best-fit model generates a Suggested Order Quantity (SOQ) report which is provided to the Complex buyers. This report provides all the above data plus quantity and price extensions and projected product performance for the next four quarters.

Statistical modelling as described is adequate for approximately 95 percent of CDC-stocked items. Through use of a tear sheet, buyers are able to modify or override quantities and prices as necessary, based on anticipated

chan s in sales patterns due to vendor promotions or o ner factors, or on price negotiations with vendor sales personnel which may yield Redistribution Allowances (RA's) or Voluntary Price Reductions (VPR's), two forms of vendor discounts. In the case of modifications to anticipated sales based on vendor promotions, SOQ's are also coded for "straight-lining" in the coming year's sales projections. The system also provides three-year usage data upon request for buyers' use when the automatically generated SOQ appears to be unrealistic.

After negotiation with vendors' sales representatives, approved purchase orders are re-entered into the system for processing. The next day's output consists of an obligation authorization (DD Form 1155), which is provided to the MCAS El Toro accounting office for official obligation of funds, and a warehouse receipt document (Form 10433), which is provided to the warehouse receiving section pending delivery of goods. The receipt document is verified or corrected upon delivery of goods to the CDC, and the results input by the Complex ADP staff to update the perpetual inventory record. This document is then matched to the Purchase Order for billing and payment purposes. For late deliveries, the receiving document file also generates a late delivery listing for the buyers,

showing the item, quantity, point of contact and telephone number so that vendors can be contacted.

Payment terms and discounts are based on the date of product delivery or date of receipt of the vendor's corrected invoice, whichever is later, and are taken or not taken by the disbursing office of MCAS El Toro, dependent on the current cost of funds in the federal sector and the relative advantage to the government.

2. Blanket Purchase Agreements (BPA's)

A BPA is in essence a line of credit with a wholesaler, and is utilized to procure individual store requirements for meat, produce, bakery products and other perishables; for special items stocked by only one or two stores where CDC distribution is impractical; and by the CDC or local stores to take advantage of seasonal or regional buys of items where a price advantage over DPSC purchase can be realized. BPA's are also utilized to procure operating supplies such as cellophane, wrapping paper, and styrofoam trays. An individual BPA with a vendor typically includes multiple products. "Calls" on BPA's are made to the vendor by either CDC buyers or authorized personnel at individual stores. Receipts are provided daily by the CDC or by stores using the CRT terminals. Following input to the mainframe computer, these receipts undergo nightly batch processing to update inventories and financial records. Vendors invoice the Complex for payment at the end of each month.

F. CDC OPERATIONS

1. Receiving and Storage Procedures

The 125,000 square foot CDC warehouse encompasses 3500 picking slots (specific item locations), and issues forty percent of total store sales (53 percent of grocery sales). The picking slots are assigned priority designations for picking efficiency. Using an automated quadrant and slotting report, the actual slot location for each item is determined based on assignment of fast-moving products to the most efficient and accessible slots and slower-moving items to less efficient slots. Items are balanced within quadrants to avoid order picking congestion. A standard slot numbering sytem is used to reduce search time by pickers; each warehouse aisle follows the same numbering system, with the lowest slot numbers in each quadrant assigned to the fastest moving items. Exhibit 4 depicts the picking slot numbering scheme used within the CDC.

The warehouse receiving report generated by the ADP system, which is used by warehouse personnel to check in vendor deliveries, also specifies the picking location where the product is to be positioned, and the required pallet dimensions to facilitate storage. Inbound products are located in surplus slots nearest their picking locations to minimize picking slot replenishment time. The system also

PICKING SLOT LAYOUT

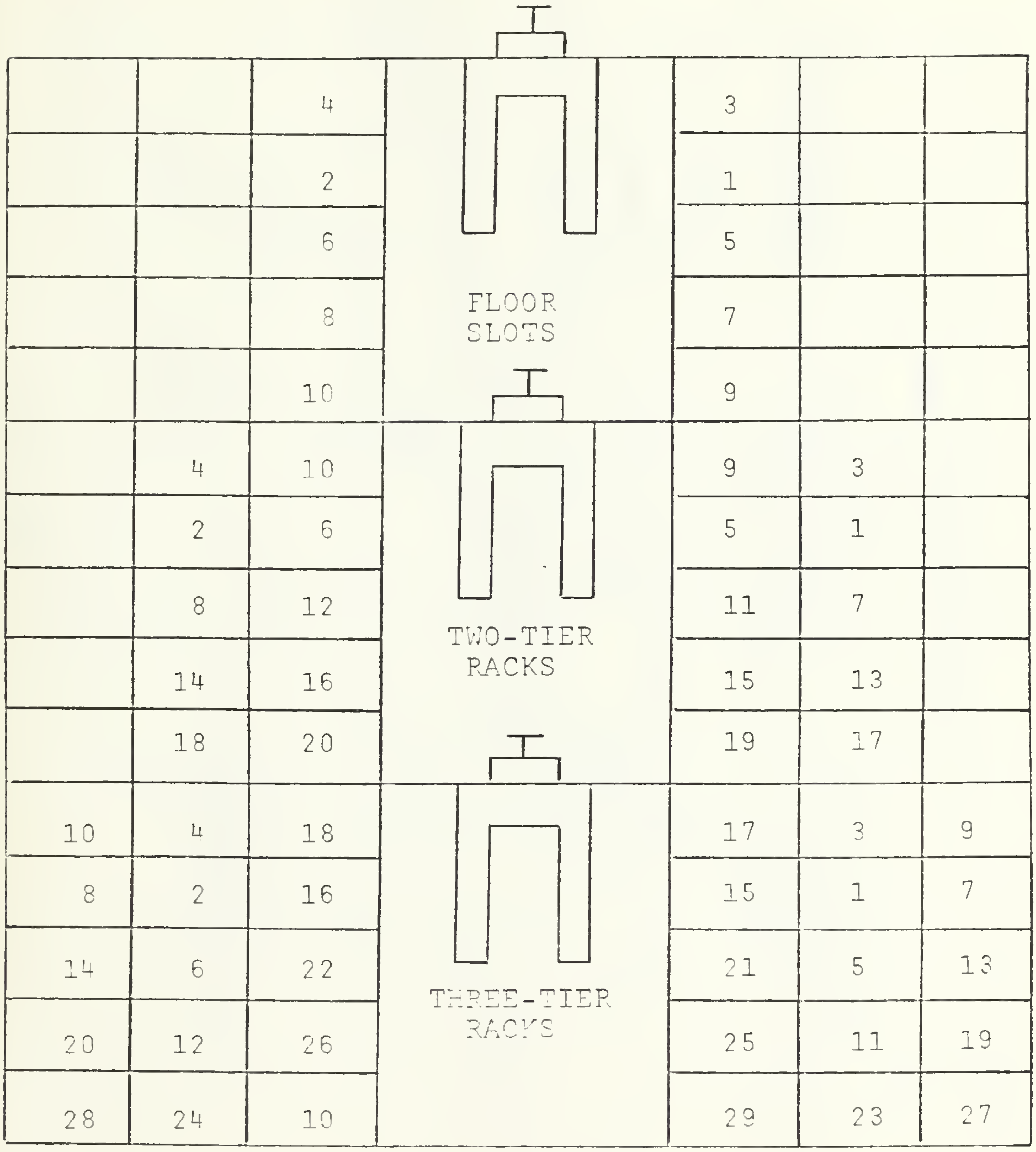

EXHIBIT 4

<u>WORK ASSIGNMENT LABEL</u>

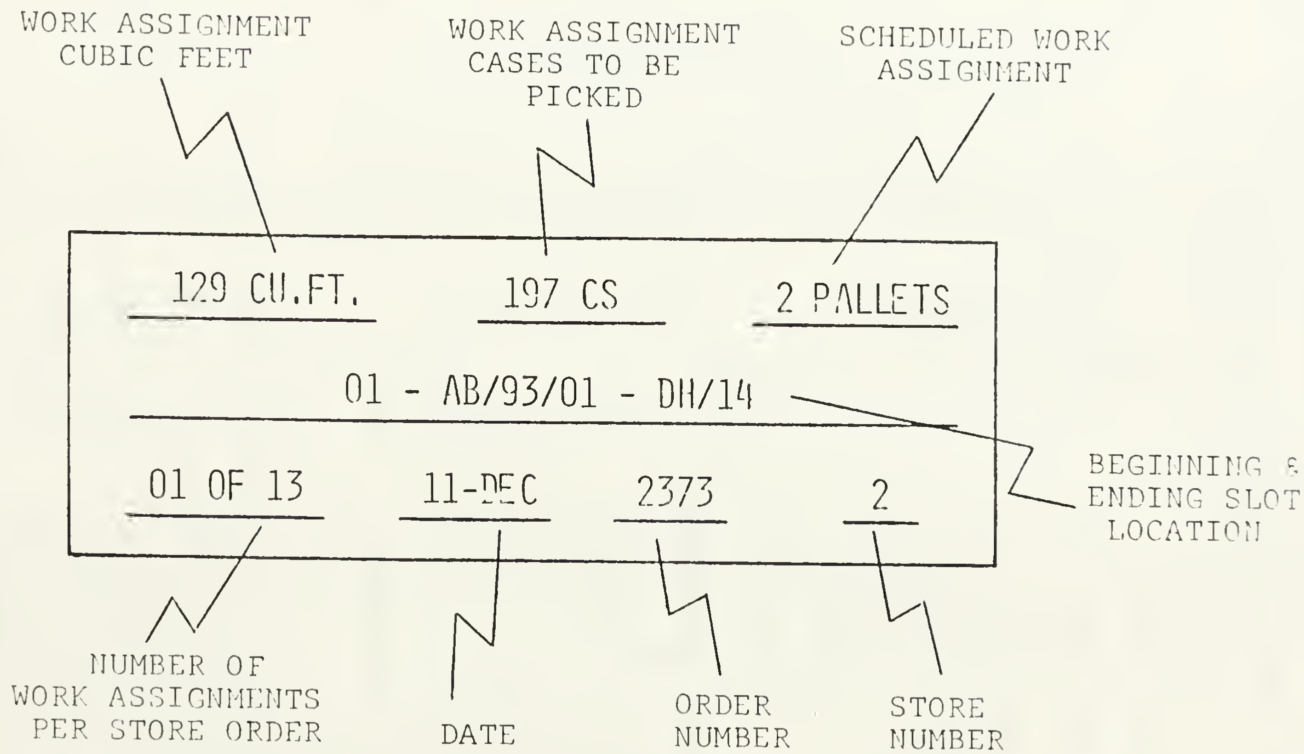

EXHIBIT 5

CASE LABEL

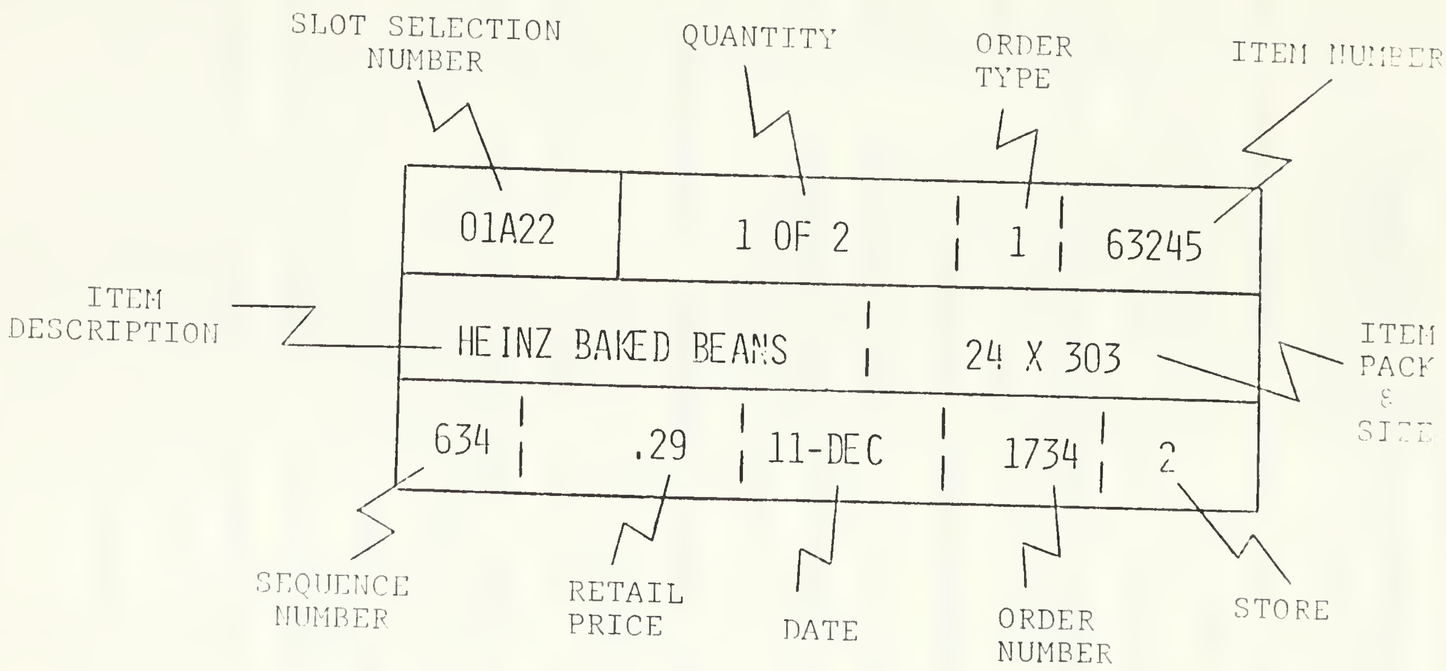

EXHIBIT 6

generates a daily stock status report, showing surplus product quantities which can be moved to picking slots as those slots are depleted.

2. Picking and Shipping Procedures

Store orders transmitted via DOE are telephonically entered into the computer, which generates a work assignment for each 140 cubic feet or 5,000 pounds (two pallets) of product ordered (Exhibit 5), and prints the order on adhesive-backed labels (Exhibit 6). These labels contain all the information necessary for the warehouse personnel to pick and deliver an individual item to a store, are produced in slot number (item picking) sequence, and are used as the picking document by the order assembler. The order label is placed on each item case as it is picked, and also serves as the stores' primary information source for receiving and pricing functions.

Order workers assemble store orders on pallets, which are moved with powered pallet jacks capable of handling two 48-by-40 inch pallets. Loaded pallets are moved directly into trailers at the loading dock.

For each order, a sequence control sheet is printed and sent to the store as a check-in document, and a store order invoice is produced showing charges and summarizing items not shipped.

G. TRANSPORTATION

Six 45-foot semitrailers belonging to the the CDC are used to transport goods to the stores. For Iwakuni shipments, sea vans are used. The frequency of store deliveries is based on efficient use of transportation and maintenance of a low probability of store stock-outs. Delivery frequency varies from approximately 45 deliveries per month at the largest store to five per month at the smallest. The Marine Corps prescribes a goal of 92 percent service level to its stores; that is, 92 percent of store orders are to be filled on schedule. The Complex interprets this as a requirement to fill at least 92 percent of the quantity ordered of each item, rather than of aggregate orders. The Complex presently maintains a 95 percent service level under this interpretation. Movement is done by contracted commercial trucking firms and reimbursed through TRF operating funds.

Exhibit 7 shows round-trip mileage to each store, and a history of average cost per trip. Although some of the cost variance shown may be attributable to changing fuel prices, carriers have indicated to Complex management that the primary source of cost reductions has been the efficiency and timeliness of loading at the CDC and unloading at the stores, which reduces carrier waiting time.

Exhibit 8 shows projected and actual annual costs of transportation for the Complex, and transportation as a

percentage of total sales. As a matter of interest, the annual cost projected in the 1978 Management Horizons study, which did not include Yuma, was $179,000, or 15 percent higher than the total annual cost achieved in 1984.

TRANSPORTATION COSTS PER TRIP

STORE	ROUND-TRIP MILEAGE FROM CDC	AVERAGE COST PER TRIP ($) FY-81	FY-83	FY-85
San Onofre	62	105	75	60
Camp Pendleton	116	135	100	107
Barstow	262	305	332	245
29 Palms	292	330	300	273
Yuma	500	500	400	373

(Source: West Coast Commissary Complex)

EXHIBIT 7

H. PRICING

Commissaries are required to sell goods at cost, plus a surcharge to cover operating expenses, inventory losses, and capital investments. Since April 1, 1983, the surcharge has been standardized throughout DOD at five percent of cost of goods sold.

As noted previously, vendors' prices are typically FOB destination. Store selling prices within the Complex are based on the cost of the latest item delivery to the CDC (LIFO costing) as approved by the service headquarters, providing an inflation offset for the Stock Fund.

ANNUAL TRANSPORTATION COSTS

FISCAL YEAR	PROJECTED COSTS ($)	ACTUAL COSTS	ANNUAL SALES ($MILLION)	TRANSPORTATION COSTS AS PERCENT OF SALES
1981	215,800	171,829	50.895	0.34
1982	188,344	154,572	54.255	0.28
1983	178,192	153,902	56.373	0.27
1984	164,920	157,456	60.265	0.26
1985	155,867	n.a.	n.a.	n.a.

n.a. -- not available

(Source: West Coast Commissary Complex)

EXHIBIT 8

Stores are advised of current prices through two channels. First, the picking labels attached to case deliveries show price based on the latest CDC delivery as generated by the ADP programs. Additionally, a daily price change report is provided to each store listing those items for which a change has occurred.

Several pricing benefits of the Complex system are shown in the chapter on costs and benefits.

I. STORE OPERATIONS

1. Back-Room Processing

Upon delivery to the stores, CDC orders are unloaded by pallet and moved to a back-room processing area for check-in and pricing. The products are case-cut (usually to half cases) and placed on a gravity conveyor. Product check-in and price look-up are accomplished via the sequenced case labels previously described (Exhibit 6), and individual items are price-marked. Processed cases are then placed on semi-live skids designated by individual store aisle and moved to a storage area ready to be taken to the sales floor for stocking. Surplus items (i.e., items exceeding shelf capacity) are also processed and placed on aisle-designated skids to eliminate double handling and to facilitate later stocking. Order check-in time averages 30 minutes per trailer. The cutting and pricing operations are performed at an average rate of 81 cases per hour.

Exhibit 9 shows a typical store's back-room processing system.

2. Store Shelf Allocation

The ADP system generates a store ordering catalog for CDC-stocked items, which also provides an ordering guide showing the weekly movement history for each item of

<u>BACKROOM PROCESSING SYSTEM</u>

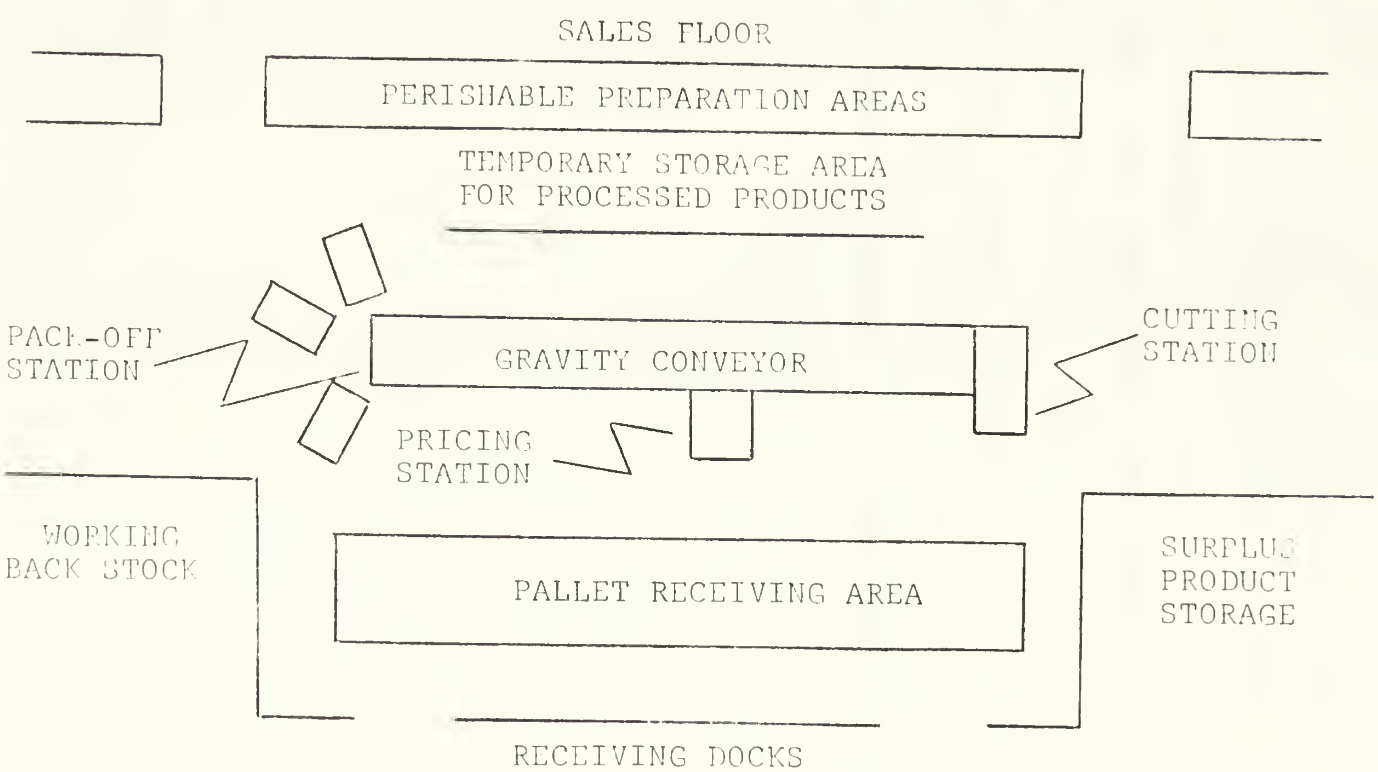

EXHIBIT 9

inventory for determination of required shelf allocation. Shelf space for each item is calculated to permit full case stocking, preserve attractive merchandise appearance, and maintain a low probability of stock-outs between order deliveries. Allocated shelf space is reserved by means of an allocation tag generated in store layout sequence, which also contains the CDC order entry code for wanding with the DOE unit.

Through this system, shelf allocations are continually updated based on the store's layout plan, item sales history, lead time, unit standard pack, and delivery frequency.

IV. COSTS AND BENEFITS

A. COSTS

The one-time costs incurred in consolidation involved warehouse renovation and office construction; purchases of equipment for the Complex office, Central Distribution Center (CDC), and individual stores; and consulting fees for the development and design of the ADP system. One-time costs of conversion are summarized in Exhibit 1Ø.

No expenses were incurred as a result of employee terminations or relocations. Although the elimination of purchasing, accounting and warehouse functions at the individual stores permitted a 17 man-year reduction in labor during the first year of operations, this reduction was accomplished through normal attrition or job transfers.

Exhibit 11 shows the projections made in 1979 of annual recurring costs for support of the Complex's operations. These expected costs consist of ADP equipment leasing fees (including leased lines), contracted data processing fees, warranties on DOE devices, and contracted transportation of goods between the CDC and supported stores.

ONE-TIME CONVERSION COSTS

CONSTRUCTION		
Warehouse/Office Renovation	$484,597	
Architecture and Engineering	31,444	
		516,041
CDC EQUIPMENT		
Warehouse Racking	131,399	
Material Handling Equipment	96,543	
Semitrailers (6)	91,896	
Cleaning/Maintenence Equipment	12,693	
		339,531
COMMISSARY STORE EQUIPMENT		
Backroom Conveyor Systems (5)	13,676	
Material Handling Equipment	20,696	
Data Order Entry (DOE) Devices	35,782	
Miscellaneous	2,360	
		72,514
COMPLEX OFFICE		
Informatics Subscription Fee	10,000	
Forms Burster and Decollator	8,281	
		18,281
MANAGEMENT HORIZONS/INFORMATICS FEES (Includes east coast stores)		363,000
TOTAL		$1,309,447

EXHIBIT 10

B. BENEFITS

In this section, each identifiable benefit that appears to be significant is presented and a value assigned where feasible.

ESTIMATE OF ANNUAL RECURRING COSTS

Informatics ADP equipment lease	$ 74,566
Data 100 lease	28,872
Warranty on DOE devices	94
Transportation contract	179,000
TOTAL	$282,532

EXHIBIT 11

1. Stock Fund Inventory Reduction

Commissary inventories are valued at actual cost. The value of the combined inventories maintained by the individual west coast commissary stores in Fiscal Year 1979 totalled $4.8 million. By the end of FY 1984, inventories at the CDC and stores have been reduced to $3.3 million, a reduction of $1.5 million or 31 percent. This reduction in merchandise inventory is in inverse proportion to the changes in dollar sales, range of items stocked, and stock turnover. The reduction was primarily made possible by increased frequency of deliveries to stores from the CDC, with deliveries tailored to meet individual store requirements, and because individual stores no longer need stock more than one or two days' requirements.

The principal benefit derived from stock fund inventory reduction results from the value of funds in the federal money exchange, and from the alternate uses to which the funds may be applied.

2. Reduced Labor Costs

In 1978, at the time of the Management Horizons study, the six domestic stores comprising the present West Coast Commissary Complex employed 277 full-time equivalent (FTE) personnel and registered combined retail sales of \$35.26 million. By 1984, with 300 FTE employees, sales reached \$60.625 million, or a 71 percent increase in sales (27.6 percent applying the Producers' Price Index as calculated by the Bureau of Labor Statistics, U.S. Department of Labor) with only an 8.3 percent manpower increase. These results came not only from consolidation of supervisory, administrative, purchasing, and warehouse functions at the Complex, but from increased productivity resulting from automation, improved management information, training, organization, and utilization of labor-saving devices.

3. Reduced Warehouse Requirement

Due to frequent deliveries, the requirement for warehouse area within individual stores has been virtually eliminated. In most cases, arriving merchandise is stocked immediately on the sales shelves.

The total warehouse area used by the commissary system at El Toro encompasses 125,000 square feet. This is an increase of only 45,000 square feet over the warehouse area previously required to support the one independent El Toro store, yet services all seven stores affiliated with the Complex.

At present, most individual store warehouses have not been made available for alternative use because, for the most part, the areas previously used for warehousing are internal to the stores. However, the Complex headquarters and CDC occupy the area formerly used by the El Toro store, and one warehouse and two Butler Buildings comprising 53,165 square feet have been returned to Camp Pendleton for other uses. Overall, the warehouse area utilized has been reduced by 8,165 square feet.

The greatest potential benefit from the central warehousing procedure is expected to be realized as replacement stores are built. Existing facilities are often converted from other uses and so are not designed for efficient commissary operations. The new stores, when constructed, will not require extensive warehouse areas--an opportunity for cost reduction in their design. This will reduce capital expenditure requirements from the TRF. The replacement store currently under construction at Barstow does not include a warehouse, only a receiving and back-room processing area.

4. Pricing

Pricing benefits to Complex customers accrue through Voluntary Price Reductions (VPR's) and Redistribution Allowances (RA's).

a. Voluntary Price Reductions

As previously noted, vendors are required to offer wholesale goods to commissaries at prices no higher than those offered to commercial retailers within the same geographical region. Further, the Robinson-Patman Act prohibits price discrimination in sales of "like grade and quality" commodities where the effect of such discrimination would be lessened competition. As the sovereign, however, the U.S. government enjoys exemption from this Act, permitting vendors to offer lower prices to commissaries and other government agencies than to commercial retailers. [Ref. 29]. Manufacturers' incentives to offer price reductions to the Complex stem from several considerations.

First, consolidation of store orders and delivery to a single location (the CDC) offer advantages to the distributor in terms of reduced administrative overhead in order processing, transportation, billing, and accounts receivable which can be passed on to the Complex through price reductions.

Second, commissary sales offer the opportunity for suppliers to create brand loyalties which may carry over

to sales through commercial outlets, thereby providing incentives to offer products at or below cost [Ref. 30].

Finally, distributors have cited patriotic considerations as a reason for extra effort to offer minimum prices to commissaries [Ref. 31].

The cost reductions resulting from VPR's have the secondary effect of reducing the cost base on which the five percent surcharge is based, providing incentives to Complex management for increased efficiency.

At present, about 99 percent of vendors supplying the Complex offer VPR's.

b. Redistribution Allowances

Prices offered by distributors are typically FOB destination, and domestic transportation charges are included in cost of goods sold. As in the case of VPR's, reduced administrative overhead and transportation costs accrue to the vendor through consolidation of orders and deliveries; second destination charges for store deliveries are borne by the Complex through TRF operating funds. As a result, about 40 percent of vendors offer RA's to the Complex, either as a reduction in delivered price of goods, or as a monthly remittance to the Complex which is deposited to the TRF.

As in the case of VPR's, the net effect of RA's is to reduce the surcharge cost base.

STOCK RANGE

STORE	NO. ITEMS 1978	NO. ITEMS AVAILABLE 1985	PERCENT CHANGE
El Toro	2,897	3300	+ 13.9
Camp Pendleton	2,931	3300	+ 12.6
29 Palms	1,568	3300	+110.5
Barstow	2,303	3300	+ 43.3

EXHIBIT 12

5. Reduced Administrative Overhead

As do the distributors, the Complex benefits from a reduction in administrative overhead through centralization of ordering, accounting, and distribution. Examples of this reduction include purchase orders processed through the Complex headquarters (currently approximately 300 per month as compared to a like number previously processed at each store) and the 1600 to 2000 PO and BPA invoices processed monthly through the Complex and the MCAS El Toro accounting and disbursing offices (versus a similar volume previously processed by each store and supporting base). Although actual cost data for processing these documents were not available, an overhead cost avoidance of 70-80 percent of previous costs does not appear unrealistic.

SALES/FTE EMPLOYEE ($)

STORE	SALES APR 1978	SALES APR 1985*	PERCENT CHANGE
El Toro	12,523	17,591	+ 40.5
Camp Pendleton	10,988	15,302	+ 39.3
29 Palms	7,376	13,020	+ 76.5
Barstow	3,902	8,996	+130.5
Yuma	5,935	13,465	+126.9
AVERAGE	9,416	13,675**	+ 45.2

* Adjusted to 1978 base using Producers' Price Index, Bureau of Labor Statistics

** Includes 42 FTE headquarters and CDC personnel

EXHIBIT 13

6. Improved Stock Range

Exhibit 12 compares the ranges of items warehoused by four stores prior to consolidation with the number of items available through the CDC. While stock range has increased marginally for the two largest stores in the Complex, the range available to the smaller and more remote stores shows a dramatic improvement.

7. Employee Productivity

Exhibit 13 shows average dollars of sales per full-time equivalent (FTE) employee for a comparable pre- and

post-Complex period. The dramatic increase in productivity can be attributed to management improvements made possible by automation and the MIS, overhead reductions as previously noted, and enhanced sales at individual stores resulting from price advantages and the increased range of available goods. Again, the greatest benefit is shown by the smaller and more remote stores. Exhibit 14 shows actual FTE employees at each activity for the same periods.

FTE PERSONNEL

ACTIVITY	1978	1985	CHANGE + OR (-)
El Toro	85	82	(3)
Camp Pendleton	94	81	(13)
San Onofre	13	17	4
Barstow	21	19	(2)
29 Palms	34	32	(2)
Headquarters/CDC	0	42	42
TOTAL	277	300	23

EXHIBIT 14

8. Increased Patronage

The increased ranges of available goods, price advantages, and decreased incidence of stock-outs have

attracted increasing numbers of customers since the Complex's inception. Exhibit 15 shows daily average customer patronage for the previous four fiscal years. As expected, the increase of patronage at the smaller stores is significantly greater.

AVERAGE DAILY CUSTOMER USAGE

STORE	FY-81	FY-82	FY-83	FY-84	%CHANGE FY-81-84
El Toro	1465	1491	1555	1628	+ 11.1
San Onofre	455	458	467	524	+ 15.2
Camp Pendle-ton	1241	1270	1364	1405	+ 13.2
Barstow	257	269	269	369	+ 28.0
29 Palms	726	752	817	877	+ 20.8
Yuma	492	535	565	601	+ 22.2
TOTAL	4636	4775	5037	5364	+ 15.7

EXHIBIT 15

Exhibit 16 displays the average sale per customer for each store for fiscal years 1981 to 1984. As in the case of the number of patrons, the average sale has increased by a larger percentage in the smaller and more remote stores, again providing an indication that improved stockage and prices have attracted a larger proportion of

customers' busi ss. If data were available for the pre-Complex period, the changes would undoubtedly be more striking.

AVERAGE SALE PER CUSTOMER

STORE	FY-81	FY-82	FY-83	FY-84	% CHANGE FY-81-84
El Toro	52.10	53.59	52.02	52.50	+ 0.7
San Onofre	24.53	27.75	27.61	28.46	+ 16.0
Camp Pendleton	56.71	57.43	55.23	55.50	- 2.1
Barstow	33.04	33.94	34.31	35.30	+ 4.0
29 Palms	28.47	30.89	31.14	32.09	+ 12.7
Yuma	32.43	34.32	35.19	36.81	+ 13.5
COMPLEX AVERAGE	43.91	45.30	44.41	44.97	+ 13.5

EXHIBIT 16

9. Other Benefits

a. Cardboard Recycling

The CDC and stores generate an average 100 tons of recyclable cardboard each month. Through a commercial contract, balers are provided at each store and the CDC to bale this product for sale. Delivery trailers returning to

the CDC also return these bales, which are loaded directly on the contractor's trailer.

The Complex receives approximately $30,000 per year through this contract for deposit to the TRF. At the same time, the supported bases estimate a cost avoidance in refuse disposal expenses totalling $35,000 per year. A further, non-quantifiable benefit of this system is the ecological advantage of reduced land-fill requirements at each base.

b. Courier/Transportation Service

Store deliveries provide additional advantages to the commands served, in that courier service of unclassified material and transportation of unclassified equipment and repair parts are available at no cost on a space-available basis. The value of these services is not quantifiable from available data.

C. SUMMARY

The overall result of consolidation and automation has been improved service to patrons, as demonstrated in the significant increase of patronage of the stores. This improved service is most striking for the smaller, more remote stores which previously, due to low sales volume and transportation distances, were unable to achieve significant economies of scale.

1. Benefits of Automation

The automation of ordering, inventory, and CDC layout has demonstrated its value in several ways. These include reduction in stock-funded inventory, consistently high service levels to the supported stores, and fewer labor hours per dollar of sales. The management reports generated have aided management at the Complex and stores in item selection and store shelf allocation, resulting in more efficient use of sales areas and continuous reevaluation of stock to assure that the item range closely approximates customers' desires.

2. Benefits of Consolidation

Consolidation of functions within the Complex has yielded the benefits of centralized management expertise within the headquarters. This allows the individual store manager to devote his attention to improving internal operations rather than to administrative and financial matters.

A furtner major benefit of consolidation has been the increased range of stock available to the smaller stores, and the lower prices available to customers because of the Complex's ability to obtain vendor discounts and redistribution allowances. Reductions in warehouse requirements are significant, and will result in lower costs of construction as new stores are required.

3. Performance Comparisons

Exhibit 17 compares several performance factors for the DOD commissary systems as a whole, the Marine Corps, the Complex, and commercial retail grocers for 1983 [Ref. 32, 33].

As may be noted, the average range of goods in Complex stores exceeds the averages for both DOD and the Marine Corps. The considerable discrepancy between commissary and commercial retailers' ranges is due primarily to statutory restrictions placed on the types of items commissaries are permitted to offer. Commercial outlets stock many items of housewares, clothing, tobacco products and other items not authorized for Marine Corps commissaries.

The average patronage of Complex stores, though improving, still trails behind DOD and Marine Corps averages. Three of the six stores considered, however, are located at relatively small desert activities with limited populations. If the three desert stores are factored out, the remaining southern California stores' weekly customer count exceeds 6700, or 32 percent higher than the average for all DOD.

The effectiveness and efficiency of the Complex are best shown in the data for sales per labor hour, average weekly sales per store, average customer order, and

PERFORMANCE COMPARISONS

	DOD	MARINE CORPS	COMPLEX	COMMERCIAL MARKET
Number of Items Stocked	5478	5787	5828	11,328
Average Sales Area	13,922	14,849	14,040	17,000
Average Hours/Week	43.3	43.8	40.5	102.0
Average Customers/Week	5126	4501	4068	8800
Average Order ($)	41.38	41.00	44.41	11.79
Sales/Square Foot/Week	14.36	12.42	12.87	6.93
Sales/Labor Hour ($)	101.83	83.39	112.00	85.00
Labor Cost/Sales (%)	10.87	11.20	12.80	11.00
Average Sales/Store/Week	213.8	170.3	180.7	104.9
Inventory Turnover/Year	13.5	14.3	15.6	13.6
Surcharge (% of sales)	5.0	5.0	5.0	14.3*
Average Pilferage/Year (%)	n.a.	0.6	n.a.	> 2.0

* -- Gross Margin

n.a. -- Not available

EXHIBIT 17

inventory turnover, all of which exceed the figures for commercial outlets and either exceed or are competitive with Marine Corps and DOD data.

Labor cost as a percent of sales for the Complex is significantly higher than for the other services and commercial stores. However, the reader must keep in mind that sales are based on wholesale cost. The author's interpretation, in view of demonstrated productivity improvements, is that this figure more accurately indicates the success of the Complex in maintaining minimum prices. Further, federal pay scales for Wage Grade employees are regionally determined based in part on the cost of living in the area, so direct comparison of labor costs with other commissaries would be of little value to this analysis.

Like labor, transportation and utilities expenses are highly geographically dependent. A comparison of those factors would have little significance in this study.

4. <u>Need for Directives Update</u>

The Complex has demonstrated the benefits of automation in its operations and management. However, the applicable service directives still prescribe a system of manual reporting of performance results.

The Marine Corps could benefit from a study of the automated reports developed by Management Horizons and the Complex to determine which are valid and required, both in the case of management reports and of performance reports to

higher headquarters. Such a study could identify those ADP outputs which have questionable value or contain redundancies, thereby assuring the most efficient use of expensive processing time and materials. Finally, those outputs determined to be valid and economical should be formalized and standardized in the service directives.

V. POLICY IMPLICATIONS

While the benefits of consolidation have been demonstrated, there are several implications of current policies that warrant attention.

A. EFFECT OF SURCHARGE

Prior to April of 1983, each service was authorized to determine the amount of surcharge to be applied to the cost base at which its commissaries procured goods [Ref. 34]. Since that time, however, DOD has prescribed a standard five percent surcharge rate for all commissaries. There are three potential effects of standardizing the surcharge at a fixed percentage.

First, because revenues are remitted to service headquarters' and realloted to stores, the result is that those stores in higher cost areas effectively subsidize those in lower-cost areas.

Second, the higher surcharge paid by patrons in these areas exacerbates the higher cost of goods sold already borne, potentially reducing patronage due to a lower price differential over commercial outlets.

Finally, the commissary system as a whole seeks to improve its effectiveness and efficiency, which requires capital investments in plant and equipment. A flat percentage surcharge rate may in fact act as a disincentive to commissary managers to obtain the lowest possible wholesale prices, because lower prices in turn mean lower revenues, and so a lower level of operations and investment funds available. This effect is analogous to the now-illegal "cost-plus-percent-of-cost" procedure used in government contracting in the early part of this century.

The original intent of the standard surcharge may have been to standardize commissary prices throughout the country. However, this has not been the result. It has already been shown that not all commissaries procure goods for sale at the same prices.

It appears that a more equitable policy, and one providing greater performance incentives to commissary system personnel, could be devised. One possibility would be to determine the surcharge rate based on a standard percentage savings rate to be achieved over local retail grocers. DOD, as previously noted, is already required to conduct annual price surveys in order to justify the commissary stores. While prices would not be standardized nationwide, establishment of surcharges on a regional basis could alleviate subsidization of lower-cost areas by higher-cost areas which results from the current policy.

B. VENDOR COUPONS

Although DOD's policy requires commissaries to redeem vendors' coupons, those received by Marine Corps commissary stores are processed by the exchange system, which also accrues the proceeds and remits them to the recreation fund. This policy originated due to the low number of coupons redeemed in the past by the relatively small Marine Corps commissary system, and the additional man-hours required to process the coupons.

In 1984, the West Coast Complex accepted 1,989,095 coupons. At an average five cents processing charge per coupon, a potential revenue for the TRF of $99,455 (less the cost of processing) has been foregone as a result of this policy. While the benefit to the recreation fund is significant, these same funds could be well used for capital investment in such assets as point-of-sale scanners to further improve efficiency in the commissaries.

C. SEPARATE SERVICE COMMISSARY SYSTEMS

While there are advantages to each service's procurement of its unique weapon systems and support equipment, there are no unique aspects to subsistence items other than regional customer preferences, prices, and cost of living. The West Coast Commissary Complex has demonstrated the advantages of regional consolidation of operations, yet systems are run by the navy and air force in the same area.

If the goal of the military commissary is to provide subsistence at the lowest practicable cost, there may be merit in integration of the services' efforts. While a joint DOD commissary system might prove unweildy, the services should seek greater economies through determination of the service best able to provide centralized procurement and distribution services for any particular area. The commissaries appear to be a service where interservice rivalries do not have a place.

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27. Ibid., p.4-6.

28. Ibid.

29. H.A.S.C. No. 98-34, pp. 954-959.

30. Ibid.

31. Ibid.

32. H.A.S.C. No. 98-34, p. 890.

33. Headquarters, U. S. Marine Corps Unclassified letter LFS-1 to Officer in Charge, West Coast Commissary Distribution Complex, Subject: FY84 Marine Corps Commissary Analyses, 23 January 1985.

34. DOD Directive 1330.17, Enclosure 4, p. 4-3.

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